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The Claims

The following listing of claims will replace all prior versions, and listings, of claims in the present application:

1. (Previously Presented) A closed mold method of making a composite having a barrier layer, the method comprising:

providing a mold;

applying and curing a layer of gel coat on an inside surface of the mold;

applying and curing a layer of barrier composition over the cured gel coat, the barrier composition comprising:

about 10 to about 50 wt% vinyl ester resin;

about 15 to about 60 wt% polyester resin;

0 to about 30 wt% monomer;

about 1 to about 15 wt% thickening agent;

about 0.1 to about 5 wt% accelerators;

about 1 to about 25 wt% filler; and

a catalyst;

applying a layer of fiberglass reinforcement over the cured barrier composition;

applying resin to the fiberglass reinforcement;

closing the mold;

curing the resin; and

opening the mold and removing the composite,

wherein the composite has an improved surface finish compared to a composite made with a closed mold process without the barrier composition.

2. (Original) The method of claim 1 wherein the mold is a two piece mold, and wherein the mold is closed by moving the two pieces together.

3. (Original) The method of claim 2 further comprising applying pressure to the mold.

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4. (Original) The method of claim 2 wherein the resin is applied after the mold is closed, and wherein the resin is applied under pressure.
5. (Original) The method of claim 4 wherein a vacuum is applied after the mold is closed.
6. (Original) The method of claim 1 wherein the mold is closed by sealing a vacuum bag around the mold.
7. (Original) The method of claim 6 further comprising applying a vacuum to the vacuum bag.
8. (Original) The method of claim 7 wherein the resin is applied after the vacuum is applied.
9. (Original) The method of claim 1 wherein the closed mold method is a closed mold process selected from compression molding, vacuum bag molding, vacuum infusion molding, or resin transfer molding.
10. (Original) The method of claim 1 wherein the accelerators comprise at least one material selected from dimethyl para-toluidine, dimethyl aniline, diethyl aniline, dimethyl acetalacetamide, cobalt octoate, potassium octoate, copper naphthanate, quaternary ammonium salts, or mixtures thereof.
11. (Original) The method of claim 1 wherein the fillers comprise a material selected from hollow spheres or microspheres, wollastonite fibers, mica, potassium aluminum silicate, calcium silicate, calcium sulfate, aluminum trihydrate, or combinations thereof.
12. (Original) The method of claim 11 wherein the hollow spheres or microspheres comprise a material selected from silicate glass, ceramic, plastic, or combinations thereof.

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13. (Original) The method of claim 1 wherein said thickening agent is a thixotropic clay.

14. (Original) The method of claim 1 further including fumed silica.

15. (Original) The method of claim 1, wherein the catalyst is selected from methyl ethyl ketone peroxide, benzoyl peroxide, or cumyl hydroperoxide.

16. (Original) The method of claim 1, wherein the barrier composition comprises:

- about 10 to about 20 wt% vinyl ester resin;
- about 40 to about 60 wt% polyester resin;
- about 5 to about 10 wt% monomer;
- about 1 to about 15 wt% thickening agent;
- 0 to about 2 wt% fumed silica;
- about 0.1 to about 5 wt% accelerators; and
- about 1 to about 25 wt% fillers.

17. (Original) The method of claim 1, wherein the barrier composition comprises:

- about 20 to about 50 wt% vinyl ester resin;
- about 15 to about 40 wt% polyester resin;
- about 5 to about 10 wt% monomer;
- about 1 to about 15 wt% thickening agent;
- 0 to about 2 wt% fumed silica;
- about 0.1 to about 5 wt% accelerators; and
- about 1 to about 25 wt% fillers.

18. (Original) The method of claim 1, further comprising applying a second layer of fiberglass reinforcement, applying resin to the second layer of fiberglass reinforcement, and curing the resin.

19. (Original) The method of claim 1, further comprising applying and curing a second layer of barrier composition.

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20-22. (Canceled)